CITY OF SAN JOSÉ, CALIFORNIA

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GERALD A. SILVA
City Auditor

January 8, 1988

Honorable Mayor and Members
of the City Council
801 North First Street, Room 600
San Jose, CA 95110

Transmitted herewith is a report on *A Review Of The City's Retirement Plans And The City And Redevelopment Agency's Cash Management Activities.* This report is in accordance with City Charter Section 805(a).

An Executive Summary is presented on the blue pages in the front of this report while an Administration response is shown on the yellow pages before the appendices.

I will present this report to the Finance Committee at its January 20, 1988 meeting. If you need additional information in the interim, please let me know. City Auditor staff who participated in the preparation of this report are Joe Morical, Dominador Melendez, Fred Casuga, and Ruth Garcia.

Respectfully submitted,

Gerald A. Silva

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City Auditor

EXSUM048
GS:mlt

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OFFICE OF THE

CITY AUDITOR

A REVIEW OF THE CITY'S RETIREMENT PLANS AND THE CITY AND REDEVELOPMENT AGENCY'S CASH MANAGEMENT ACTIVITIES

A REPORT TO THE

SAN JOSE

CITY COUNCIL

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EXECUTIVE SUMMARY

In accordance with the City Auditor's approved 1987-88 Audit Workplan, we have reviewed the City's Retirement Plans and the City and Redevelopment Agency's cash management activities. Our review revealed the following:

- Opportunities exist to increase Retirement Fund earnings and reduce administrative costs.

- Charging the Retirement Plans for services provided by the Personnel Department would reduce General Fund expenditures by about $229,000 a year.

- Unreliable cash flow information impairs the ability of City investment officials to manage the City's investment portfolio.

- The Redevelopment Agency lost interest income by maintaining bank balances in excess of the required compensating bank balance.

- Redevelopment agency cash forecasting needs to be improved.

- The Redevelopment Agency needs to obtain surplus funds from the Bond Trustee on a timely basis.

- The Finance Department needs to improve its inter-departmental coordination and monitoring of Bond Trustee investments.

Opportunities exist to increase retirement fund earnings and reduce administrative costs

The Federated and Police and Fire Retirement Plans investment portfolios are composed of fixed income (bonds), equity (stocks), and real estate securities. Over the last five years, the City's outside bond manager has generally outperformed the market indexes. However, over that same period, the two plans have engaged eight different outside equity managers who have performed, for the most part, below equity industry benchmarks. Over the last five years, if the plans' equity portfolio would have been invested in an equity index fund instead of with the variety of managers who were used, the plans could have earned about $13 million more. In addition, investment management fees could have been reduced by about $1.5 million during that same time period. However, it should be noted that current San Jose Municipal Code restrictions effectively preclude the Retirement Boards from investing in equity index funds. Accordingly, the Plan Boards should assess the use of equity index funds for investment purposes. Should the Boards conclude it is in the City's best interest to invest in such funds, they should recommend to the City Council appropriate Code amendments.

Charging the Retirement Plans for services provided by the personnel department would reduce general fund expenditures by about $229,000 a year

The City's Personnel Department provides staff, space and materials to administer the retirement plans. The General Fund absorbs the cost of these activities. By charging the retirement plans for their pro rata share of these costs, the General Fund would save about $229,000 per year.

Unreliable cash flow information impairs the ability of city investment officials to manage the City's investment portfolio

The City's method for forecasting cash receipts and disbursements produces inaccurate information. The Treasury Department uses a software system (MONEYMAX) to generate cash forecasts. However, the accuracy of the short-term forecasts is poor because the data the City inputs into the system is deficient. Because the cash forecasts are inaccurate, Treasury staff have maintained the City portfolio at a shorter average maturity period than would be necessary with more precise forecasting. As a result, the City has realized lower interest earnings.

The Redevelopment Agency lost interest income by maintaining bank balances in excess of the required compensating bank balance

From July 1985 through February 1987, the Agency lost the opportunity to earn $70,000 in investment income by maintaining a bank balance that averaged $620,000 in excess of the bank's compensating balance requirement. These excess bank balances occurred because the Agency was concerned that the bank would not honor overdrafts.

Redevelopment Agency cash forecasting needs to be improved

The Redevelopment Agency provides Treasury with monthly cash flow projections. Our review of the Agency's cash flow projections revealed that variances between projected and actual expenditures are extensive. Accordingly, Treasury investment officials have adopted a very defensive investment posture and maintained a highly liquid Redevelopment portfolio. As a result, the Redevelopment portfolio's interest earnings were unnecessarily low. We estimate the loss in interest earnings to be $500,000 to $800,000 annually.

The Redevelopment Agency needs to obtain surplus funds from the Bond Trustee on a timely basis

The Bond Trustee for various Redevelopment Agency bond issues accumulates substantial surplus funds that may be returned to the Agency. Our review revealed, however, that the Agency has been slow to secure available surplus funds from the Bond Trustee. Specifically, the Agency did not secure from the Bond Trustee over $14 million of surplus funds until September 1987 even though $6.3 million of that surplus accumulated as early as 1985-86. As a result, the Bond Trustee held funds that could have 1) increased the size of the Agency's portfolio, 2) allowed some extension of the Agency's portfolio's average maturity, and 3) increased the Agency's portfolio earnings.

The Finance department needs to improve its inter-departmental coordination and monitoring of Bond Trustee investments

The Finance Department's Treasury Division and Debt Manager share debt management responsibilities. As such, it is important that the Treasury Division coordinate its activities with the Debt Manager and closely monitor Bond Trustee investments. However, our review revealed that such coordination is informal at best and that Treasury does not adequately monitor Bond Trustee investments. As a result, as of June 30, 1987, the Bond Trustee had invested over $39 million in investments that either violated bond indenture provisions or were at variance with Treasury's internal investment policy.

RECOMMENDATIONS

We recommend that:

Recommendation #1:

The Retirement Plan Boards consider making a strategic change from active equity management to passive management for a portion of their equity portfolio. Should they conclude such a change is in the best interest of the City, they should recommend appropriate Code revisions to the City Council. (Priority 2)

Recommendation #2:

The Retirement Plans prepare budgets which provide full disclosure of administrative expenditures. We also recommend that these expenses be included in the actuarial data base when contribution rates are established and fully absorbed as Plan expenditures. (Priority 1)

Recommendation #3:

The administration initiate the "meet and confer" process to effect the reallocation of Retirement Plan administrative costs from the General Fund to the Retirement Plans. (Priority 2)

Recommendation #4:

The Department of Finance identify and input accurate cash flow information into the MONEYMAX system. If this cannot be done with the General Accounting System (GAS), then Finance should either modify the GAS or develop alternative methods to collect and input accurate receipt and disbursement data. (Priority 2)

Recommendation #5:

The Agency either solicit bids for its banking services or combine its banking activities with the City's. (Priority 1)

Recommendation #6:

The Agency develop realistic monthly and annual cash flow estimates and perform periodic variance analyses to provide the feedback necessary to adjust their estimates. (Priority 2)

Recommendation #7:

The Redevelopment Agency develop and implement procedures to ensure that the Bond Trustee returns surplus funds in a timely manner. (Priority 2)

Recommendation #8:

The Treasury Division develop and implement formal procedures for coordinating with the Debt Manager and reviewing monthly Bond Trustee statements for compliance with the bond indenture requirements and City investment policies. (Priority 2)

INTRODUCTION

In accordance with the City Auditor's approved 1987-88 workplan, we reviewed the portfolio management activities of the Finance Department and the Retirement Boards. This is the second report on this topic. The first report was issued in June 1987.

BACKGROUND

The City provides separate retirement plans for Police and Fire Department employees, and the remainder of the City's work force. Both programs provide retirement and survivor benefits. In addition, health benefits are provided for members with a minimum of fifteen years service. Both plans have been accumulating assets rapidly over the last few years. This growth is a result of an advantageous ratio of current employees to retirees and the rapid increase in equity values over the last five years. This asset growth is illustrated in TABLE I.

TABLE I

PORTFOLIO SIZE

Year	Police and Fire	Federated
1982	$133,000,000	$122,000,000
1983	168,000,000	141,000,000
1984	202,000,000	172,000,000
1985	247,000,000	193,000,000
1986	276,000,000	221,000,000

Each plan has its own Board which makes policy, renders decisions on retirement and disability cases, and provides guidance and oversight to the plan's investments. The City's Personnel Department provides administrative support to both Boards.

SCOPE AND METHODOLOGY

In this audit, we evaluated the performance of the investment portfolios for the Police and Fire and the Federated Retirement Plans. This involved comparing the asset allocation of the plans with other public retirement plans and the portfolio yields with industry benchmarks. We also reviewed the City and Redevelopment Agency's cash management practices. Finally, we assessed the Agency's activities in recouping those tax increment funds that are maintained by a Bond Trustee and which exceed principal and interest payment requirements.

FINDING I

OPPORTUNITIES EXIST TO INCREASE RETIREMENT FUND EARNINGS AND REDUCE ADMINISTRATIVE COSTS

The Federated and Police and Fire Retirement Plans investment portfolios are composed of fixed income (bonds), equity (stocks), and real estate securities. Over the last five years, the City's outside bond manager has generally outperformed the market indexes. However, over that same period, the two plans have engaged eight different outside equity managers who have performed, for the most part, below equity industry benchmarks. Over the last five years, if the plans' equity portfolios would have been invested in an equity index fund instead of with the variety of managers who were used, the Plans could have earned about $13 million more. In addition, investment management fees could have been reduced by about $1.5 million during that same time period. However, it should be noted that current San Jose Municipal Code restrictions effectively preclude the Retirement Boards from investing in equity index funds. Accordingly, the Plan Boards should assess the use of equity index funds for investment purposes. Should the Boards conclude it is in the City's best interest to invest in such funds, they should recommend to the City Council appropriate Code amendments.

Retirement Fund Financing and the Importance of Investments

The Government Finance Officers Association's publication, Investing Public Funds, makes the following comments regarding retirement fund financing:

"Generally, a retirement system can be conceptualized as a balance sheet or a scale in which the liability side consists of current earned liabilities owed to retirees and existing workers, as well as prospective pensions likely to be paid past and present workers on the basis of formulas used by the plan. On the asset side, three sources of financing are available: Employer contributions, employee contributions (if any) and investment income. Because most public pension plans are financed by employer and employee contributions collected during the working lives of the beneficiaries, funds are set aside to meet future obligations. This practice makes it possible for investment income to contribute substantially toward meeting eventual long-term liabilities."

TABLE II illustrates the relative importance of investment income as a source of funding for the retirement plans.

TABLE II

REVENUE AMOUNTS - 1986

Plan	Employee Contribution	Employer Contribution	Investment Income	Total
Federated	$ 6,035,000	$12,753,000	$23,388,000	$42,176,000
Police & Fire	5,931,000	17,808,000	28,166,000	51,905,000
TOTAL	$11,966,000	$30,561,000	$51,554,000	$94,081,000

As is shown above, investment income represented 55% of the combined funds income in 1986. Both plans are relatively young (contributors far exceed withdrawers) and have an excellent ratio of income to expenses. For 1986, Police and Fire fund expenses were 16% of revenues and Federated fund expenses were 24% of revenues. The publication, Investing Public Funds, also has several comments regarding the importance of investment income:

"Obviously, investment income plays a major role in the overall financing of the retirement system. If investment income exceeds actuarial assumptions, a surplus is generated, reducing the employer's costs and relieving budgetary pressures. Therefore, the employer and employee benefit from a successful retirement system investment program. Conversely, workers and taxpayers suffer if a plan's investment program sours, because any investment shortfalls or losses must be compensated by increased contributions or reduced benefits. Obviously, the concept of risk is meaningful, even to the employees.

Most pension funds generate sufficient cash flow from contributions to meet outgoing disbursements. In new funds and growing funds, this is particularly true because contributions increase as the work force ages, but few employees actually retire and receive their benefits in the early years of operation. Therefore, funds invested in the earlier years of a retirement system typically are not needed to meet beneficiary payments. This freedom from liquidity requirements makes the pension fund a true long-term investment fund with a long horizon. Although losses must be controlled, temporary losses can be sustained because investments in the various markets need not be liquidated to pay beneficiaries in the near future."

Therefore, the City's retirement plans, by virtue of their youth, offer a great deal of flexibility and the opportunity to view investment performance over a long time span.

Asset Allocation

The most fundamental investment decision is the categorical deployment of assets or asset allocation. In other words, the decision to invest in bonds versus stocks versus real estate. Secondary investment decisions concern how the assets will be managed after they have been allocated. Both decisions need periodic review and revision as market conditions evolve. We have included as Appendix A, the Sacramento County Board of Retirement Statement of Investment Objectives and Policies which contains a methodology regarding asset allocation. The Sacramento policy has been recommended by the Government Finance Officers Association as a model for public pension plans. The Association has several pertinent comments regarding asset allocation:

> *"Most studies of the relative performance of long-term investment portfolios reveal that more than one-half of the portfolio's total return results from asset allocation decisions. In short, the decision to invest in stocks vs. bonds vs. Treasury bills vs. real estate has more effect on the portfolio's total return than does the selection of individual securities or properties. This situation should not diminish the need for good portfolio management; rather, it should emphasize that overall portfolio decisions and investment strategies 'from the top down' may be more important than the quality of individual selections 'from the bottom up.' Thus, the system's method for allocating assets to different classes of investment securities and instruments is of major significance...*
>
> *Asset allocation is not a precise enterprise. Anyone who achieved infallible results eventually would own the world. Instead, the prudent investment official and the board of trustees recognize that investing is as much an art as a science. An investment allocation process, although rational, may not always produce rational results, let alone profitable results. On the other hand, the avoidance of unsystematic, emotional and irrational investment decision making remains a fiduciary responsibility of the board of trustees and the investment manager, which leads most fiduciaries to prefer a structured approach to asset allocation."*

Public pension fund investing has evolved over the last twenty years from portfolios that primarily contained fixed income assets to more diversified portfolios containing stocks and real estate securities. The addition of equity investments evolved as a hedge against inflation as investors found that, in general, the value of bonds decline as interest rates increase, while equity values increase. Accordingly, equities are generally a better selection in inflationary periods than in deflationary times. These factors underpin the concept of portfolio diversification which is designed to protect against the erratic actions of the business cycle.

We surveyed seven public pension plans in California to ascertain their current portfolio mix. TABLE III compares these plans to San Jose's two retirement Plans.

TABLE III

COMPARISON OF SAN JOSE PLAN ASSET ALLOCATIONS TO THE AVERAGE OF SEVEN CALIFORNIA CITIES AND COUNTIES

	Seven Other California Cities and Counties				
Investment	High	Low	Average	San Jose Federated	San Jose Police and Fire
Cash and Cash Equivalents	24%	0	12%	16%	9%
Bonds	83%	39%	54%	56%	62%
Stocks	45%	17%	29%	27%	28%
Real Estate	12%	0	5%	1%	1%

As TABLE III shows, the asset allocation of the City's plans is generally consistent with the plans surveyed with the exception of the real estate category. This variance will moderate as planned real estate acquisitions materialize. The Plan Boards need to continually monitor market conditions and periodically review their asset allocation.

Asset Manager Performance

During our review of the performance of the Retirement Plans' asset managers, we analyzed the last five years of earnings for both bonds and stocks. In the case of stocks, we also reviewed a second five-year period to ascertain if the same pattern existed from 1977 to 1981, before the bull market of 1982-1987. The Retirement Plans have used eight different outside equity managers over the last five years with rather indifferent performance. In contrast, both Plans retain the same outside bond manager who has performed well over the last five years. While the bond manager has outperformed the Salomon Brothers Bond Index by approximately $7.5 million over the last five years the equity managers have earned about $13 million less than the Standard and Poor (S&P) Index.

Computational Methodology

The following TABLES IV and V illustrate the earnings comparisons for both Retirement Plans. We made our comparison by approximating the portfolio balance for each year and multiply the earnings rate of the plan, and the index rates, by the portfolio balance.

TABLE IV

STOCK PORTFOLIO EARNINGS

Federated

Year	Portfolio Balance	Portfolio* Earnings Rate %	S&P* Index Rate %	Portfolio Earnings	Earnings at Index Rate	Difference
1982	$31,000,000	15.2	21.5	$ 4,700,000	$ 6,700,000	$(2,000,000)
1983	34,000,000	21.9	22.6	7,400,000	7,700,000	(300,000)
1984	42,000,000	0.3	6.3	100,000	2,600,000	(2,500,000)
1985	48,000,000	27.8	31.8	13,300,000	15,300,000	(2,000,000)
1986	75,000,000	20.2	18.7	15,200,000	14,000,000	1,200,000
			TOTAL	$40,700,000	$46,300,000	$(5,600,000)

Police and Fire

Year	Portfolio Balance	Portfolio* Earnings Rate %	S&P* Index Rate %	Portfolio Earnings	Earnings at Index Rate	Difference
1982	$34,000,000	22.0	21.5	$ 7,500,000	$ 7,300,000	$ 200,000
1983	44,000,000	13.4	22.6	5,900,000	9,800,000	(3,900,000)
1984	49,000,000	(0.9)	6.3	(400,000)	3,100,000	(3,500,000)
1985	62,000,000	26.8	31.8	16,600,000	19,600,000	(3,000,000)
1986	77,000,000	22.3	18.7	17,100,000	14,300,000	2,800,000
			TOTAL	$46,700,000	$54,100,000	$(7,400,000)
		COMBINED STOCK TOTAL		$87,400,000	$100,400,000	$(13,000,000)

* Earnings Rates were obtained from the Executive Summary, SEI Corporation evaluation Report of 12/86.

TABLE V

BOND PORTFOLIO EARNINGS

Federated

Year	Portfolio Balance	Portfolio* Earnings Rate %	Salomon* Index Rate %	Portfolio Earnings	Earnings at Index Rate	Difference
1982	$ 91,000,000	35.4	31.5	$ 32,200,000	$ 28,700,000	$ 3,500,000
1983	107,000,000	8.5	8.3	9,100,000	8,900,000	200,000
1984	130,000,000	14.9	14.9	19,400,000	19,400,000	-
1985	145,000,000	23.8	22.3	34,500,000	32,300,000	2,200,000
1986	144,000,000	14.4	15.5	20,700,000	22,300,000	(1,600,000)
			TOTAL	$115,900,000	$111,600,000	$ 4,300,000

Police and Fire

Year	Portfolio Balance	Portfolio* Earnings Rate %	Salomon* Index Rate %	Portfolio Earnings	Earnings at Index Rate	Difference
1982	$ 99,000,000	35.5	31.5	$ 35,100,000	$ 31,200,000	$ 3,900,000
1983	125,000,000	8.4	8.3	10,500,000	10,400,000	100,000
1984	153,000,000	14.8	14.9	22,700,000	22,800,000	(100,000)
1985	186,000,000	23.6	22.3	43,800,000	41,400,000	2,400,000
1986	199,000,000	13.9	15.5	27,700,000	30,900,000	(3,200,000)
			TOTAL	$139,800,000	$136,700,000	$ 3,100,000
			CONTINUED BOND TOTAL	$255,700,000	$248,300,000	$ 7,400,000

* Earnings Rates were obtained from the Executive Summary, SEI Corporation evaluation report of 12/86

While TABLE V shows a solid performance for the Plans' outside bond manager, TABLE IV shows a lackluster effort by the various outside equity managers. It should be noted that when we extended our equity analysis back another five years to 1977 to 1981, we found that the trend shown in TABLE IV continues. In fact, using the same analysis as shown in TABLE IV, the equity portfolios underperformed S&P earnings rates by $8 million during the 1977-1981 period.

Stock Index Funds

Past experience indicates that outside equity fund managers have not performed as well as the industry benchmarks. Therefore, in our opinion, it appears unlikely that equity fund managers will outperform the market indicators. An alternative to using equity fund managers is to invest in equity index funds. Such funds are composed of securities that replicate the index itself. With equity investments, the Standard & Poor's 500 Index is often used. Accordingly, should the Retirement Plans invest in a Standard & Poor's Index fund, the Plan's earnings would be identical, or nearly so to the index itself. Had the Plan's stock investments been entirely in an S&P index fund, they would have earned $13,000,000 more than they did with active management over the last five years, and $21,000,000 more over the last ten years.

The Government Finance Officers Association has the following to say about index funds:

"An intellectual irony presented by modern capital markets research is that if all investors perform rationally, and if their access to information is reasonably efficient, then the risk-adjusted market price of individual securities should gravitate toward the market average. Stocks whose risk-return characteristic offer attractive opportunities should be bid up, thereby reducing their return on equity to a level commensurate with the firm's risk profile. Likewise, share prices of overvalued firms should be marked down in the market place. Thus, rational investors tend to push the prices of individual shares to converge with the rest of the market. One must ask, then whether true opportunities exist to outperform the market.

Although price discrepancies theoretically exist throughout all markets, investors' actions are like those of arbitrageurs who make the markets efficient. Trustees must ask whether a money manager is likely to consistently outperform the market average, particularly when risk is taken into account. If transactions costs and advisory fees are added to the costs of stock ownership, some observers believe equity investors would be better off if they simply purchase a market-basket portfolio similar to the stock indices. In fact, several such index funds have been created with the express purpose of minimizing transaction costs and eliminating advisory fees associated with individual stock selection.

These passive strategies may not produce spectacular results, but they offer an alternative approach to the skeptical trustee and retirement administrators who question whether any money manager can be right all the time, or even most of the time.

Several large public pension funds have implemented passive equity management programs involving stock index funds or their equivalents. In some cases, the rationale for these strategies has been the growing recognition that large pension funds 'are the market' because of their huge size."

"For example, the multibillion dollar New York State and California public employee retirement systems contain such massive stock holdings that any major buying or selling programs they might undertake will likely drive the prices of any undervalued or overvalued securities. Thus, the value of research to the overall portfolio may not be adequate given the inability of the portfolio to accomplish purchases and sales without quickly forcing the price to a new equilibrium level. The large portfolio may be unable to successfully implement a well researched, value-based active portfolio strategy on a massive scale. The purchases and sales must be filtered throughout the entire marketplace.

Obviously, an efficient way to accomplish this filtering seems to be through an index fund, where the ownership proportions are consistent with the total capitalization of all stocks. Theoretically, the index fund's savings on transaction costs place the large pension fund closer to the market average than an active manager can, given the limited inefficiencies available in the market." (Emphasis added)

The recent reverses in the stock market have increased investor and public awareness of market cycles and the volatility of some stock investments. Steady and mostly uninterrupted growth in equity values over the last five years created an expectation of perpetual growth. The actual history of market cycles shows continuous up and down swings with occasional periods of stability as stock values seek a level consistent with the fundamental economic conditions of the time. Absent a "dooms day" scenario, it must be assumed the market will continue to follow historic trends.

The recent setbacks in the stock market do not invalidate the case for using equity index funds given that a certain portion of the Plan's investment assets are and will continue to be allocated to equities. Therefore, for those assets allocated to equities the decision becomes one of active versus passive management. In our opinion, it has been clearly demonstrated that over the long term, the additional expense of active management does not buy a performance level superior to less expensive passive management.

Administrative Cost

Another advantage of stock index funds is reduced management and transaction fees. Investment managers are generally compensated on a percentage of the portfolio value. The percentage declines as portfolio size increases. For example, in 1986-87 the Plans' largest equity manager was compensated as follows:

First - $ 8,000,000 = 50 Basis Points (0.5%)
Next - 8,000,000 = 40 Basis Points (0.4%)
Over - 16,000,000 = 35 Basis Points (0.35%)

In this case, the equity managers commision was a function of the above computation discounted by 35%. Generally, actively managed funds have management fees approximating 30 to 50 basis points, the lower rates applying to the larger portfolios. An index fund on the other hand would charge about eight basis points (0.08%) on an investment of $100,000,000,. Accordingly, had the Plans invested $100,000,000 in index funds, management fees would have been about $220,000 a year less than with an actively managed portfolio of the same size. In addition, we estimate that brokerage fees would be reduced at least 50% with an index fund, saving at least another $100,000 annually. Accordingly, administrative costs would be reduced about $320,000 a year if the Plans invested $100,000,000 in equity index funds or about $1.5 million over the last five years.

It should be noted that current San Jose Municipal Code restrictions effectively preclude the Retirement Boards from investing in equity index funds. Specifically, Section 3.24.350 of the Municipal Code stipulates those investments that are allowable for City Retirement Funds. Although the Code does not exclude equity index funds per se, it does preclude ownership of certain individual stocks which would be part of an equity index fund, such as the Standard & Poor's Index. Accordingly, the Plan Boards should assess the use of equity index funds for a portion of their stock investments. Should the Boards conclude it is in the City's best interest to invest in such funds, they should recommend to the City Council appropriate amendments to Section 3.24.350 of the Municipal Code.

CONCLUSION

The Retirement Plans have an opportunity to increase investment yield and reduce administrative costs by investing a portion of their stock portfolio in an equity index fund.

RECOMMENDATION

We recommend that:

Recommendation #1:

The Retirement Plan Boards consider making a strategic change from active equity management to passive management for a portion of their equity portfolio. Should they conclude such a change is in the best interest of the City, they should recommend appropriate code revisions to the City Council. (Priority 2)

FINDING II

CHARGING THE RETIREMENT PLANS FOR SERVICES PROVIDED BY THE PERSONNEL DEPARTMENT WOULD REDUCE GENERAL FUND EXPENDITURES BY ABOUT $229,000 A YEAR

The City's Personnel Department provides staff, space and materials to administer the retirement plans. The General Fund absorbs the cost of these activities. By charging the retirement plans for their pro rata share of these costs, the General Fund would save about $229,000 per year.

Plan Administration

Personnel Department employees perform day-to-day activities for the Retirement Plans. These employees are under the direction of the Executive Director who is also an employee of the Personnel Department. As a result, the Personnel Department absorbs the salaries, space and materials cost attributable to Retirement Plans. In addition, the General Fund also absorbs some direct retirement board costs for travel consultants and meetings.

TABLE VI shows the total administrative costs the General Fund incurred on behalf of the Retirement Plans in 1986-87.

TABLE VI
SUMMARY OF GENERAL FUND EXPENSES
INCURRED ON BEHALF OF THE RETIREMENT PLANS IN 1986-87

Salaries	$113,000
Fringe Benefits	13,000
TOTAL Personal Service	$126,000
Space Cost	$ 28,000
Supplies and Materials	1,500
Other Retirement Board Expenses (Consultants, Travel, and Meeting)	73,500
TOTAL	$229,000

It is a basic cost allocation principle that the entity receiving the benefit of an activity should pay its pro rata share of the cost of the activity. Clearly, the Retirement Plans are the beneficiaries of the General Fund expenses shown in TABLE VI.

As such, it appears that the Personnel Department and the Retirement Plans should clearly delineate in their budgets the costs to administer the Plans and charge those costs to the Plans as appropriate. By so doing, we estimate that General Fund expenditures would initially be reduced approximately $229,000 per year. General Fund savings may be less in later years should the City's Retirement Plan contribution rate be adjusted upward to accommodate the Plans having to pay for these administrative expenses.

It should be noted that, according to the Director of the Personnel Department, the City will have to amend its agreements with various employee unions in order to charge the Retirement Plans for the cost of administration. Accordingly, the City administration will need to initiate the "meet and confer" process with the unions in order to effectuate this change.

CONCLUSION

The General Fund is incurring administrative expenses that should be absorbed by the Retirement Plans.

RECOMMENDATION

We recommend that:

Recommendation #2:

The Retirement Plans prepare budgets which provide full disclosure of administrative expenditures. These expenses should be included in the actuarial data base when contribution rates are established and fully absorbed as plan expenditures. (Priority 2)

Recommendation #3:

The administration initiate the "meet and confer" process to effect the reallocation of Retirement Plan administrative costs from the General Fund to the Retirement Plans. (Priority 2)

FINDING III

UNRELIABLE CASH FLOW INFORMATION IMPAIRS THE ABILITY OF CITY INVESTMENT OFFICIALS TO MANAGE THE CITY'S INVESTMENT PORTFOLIO

The City's method for forecasting cash receipts and disbursements produces inaccurate information. The Treasury Department uses a software system (MONEYMAX) to generate cash forecasts. However, the accuracy of the short-term forecasts is poor because the data the City inputs into the system is deficient. Because the cash forecasts are inaccurate, Treasury staff have maintained the City portfolio at a shorter average maturity period than would be necessary with more precise forecasting. As a result, the City has realized lower interest earnings.

Cash Forecasting Concepts

The Government Finance Officers Association, in its publication, Investing Public Funds, defines the importance of cash management as follows:

> *"The ultimate test of a cash forecasting technique is pragmatic. The system should accurately forecast future cash positions so that an investor can know future asset levels with reasonable precision. If interest rates on longer-term investments exceed nearby maturities, or if an investor anticipates sudden future changes in interest rates, knowledge of future cash positions can boost income."*

Conceptually, cash forecasting is relatively simple and combines: 1) examining receipt and disbursement patterns from a historical standpoint 2) projecting those patterns to current and future periods, and 3) adjusting those projections for conditions which impact on the historical perspective. Cash forecasting can be divided into three phases: short-term, intermediate-term and long-term. While there is no precise definition of these three time spans the following definitions are generally accepted:

Short-term: one day to several weeks
Intermediate-term: three months to one year
Long-term: more than one year

Generally, cash forecasting reliability is greater for the long-term than the short-term because short-term fluctuations even out over a year's time and annual trend data is more readily available. Conversely, as the forecasting period shortens, the availability and reliability of historical data declines.

The ideal cash forecasting system has both accurate trend data and the ability to anticipate and adjust to trend aberrations.

MONEYMAX

The Treasury Department uses a software system called MONEYMAX which provides a cash forecasting sub-system. MONEYMAX provides a fourteen month rolling forecast of revenues and expenditures. This forecast is based on the actual revenues and expenditures from the corresponding month a year earlier. For example, the May 1987 forecast is based on the revenues and expenditures from May 1986. MONEYMAX also provides a daily and weekly forecast for each month. These forecasts are projected to the monthly forecast on the basis of receipts and disbursements for the same week and day of the prior year.

On a monthly basis, the City's General Accounting System (GAS) provides the receipts and disbursements data to the MONEYMAX system via a computer tape. Treasury staff supplement the GAS information when they are aware of anticipated revenue or expenditure occurrences which could affect the accuracy of the cash forecast.

Accuracy of Cash Forecasts

We found the accuracy of the City's short-term cash forecasts to be poor. Specifically, when we compared the City's daily and monthly forecast cash receipts and disbursements to actual monthly and daily bank balances, we noted variances greater than 10,000 percent. TABLES VII through X compare the City's forecasted receipts and disbursements on a monthly basis from July 1985 through December 1986 and a daily basis during February 1987 to actual bank receipts and disbursements.

TABLE VII

COMPARISON OF FORECASTED AND ACTUAL BANK RECEIPTS ON A MONTHLY BASIS DURING THE PERIOD OF JULY 1985 - DECEMBER 1986

Month	MONEYMAX Forecast	Actual Bank Receipts	Percent Variance
07/85	$ 26,316,000	$ 26,088,000	(1)
08/85	24,687,000	25,216,000	2
09/85	48,614,000	24,497,000	(50)
10/85	31,816,000	26,852,000	(16)
11/85	21,987,000	22,661,000	3
12/85	39,761,000	113,115,000	184
01/86	45,185,000	27,333,000	(40)
02/86	19,443,000	24,829,000	28
03/86	31,100,000	20,705,000	(33)
04/86	45,142,000	27,347,000	(39)
05/86	25,693,000	33,105,000	29
06/86	34,201,000	45,576,000	33
07/86	49,527,000	24,207,000	(51)
08/86	27,913,000	19,190,000	(31)
09/86	28,141,000	62,862,000	123
10/86	36,878,000	52,092,000	41
11/86	21,268,000	35,929,000	69
12/86	43,062,000	63,564,000	48
TOTAL	$600,734,000	$675,168,000	12%

Note: All figures rounded to nearest thousand. This Table shows a monthly variation between forecasts and actual receipts ranging from -51% to +184%.

TABLE VIII

COMPARISON OF FORECASTED AND ACTUAL BANK DISBURSEMENTS ON A MONTHLY BASIS DURING THE PERIOD OF JULY 1985 - DECEMBER 1986

Month	MONEYMAX Forecast	Actual Bank Disbursement	Percent Variance
07/85	$ 35,787,000	$ 35,221,000	(2)
08/85	31,042,000	28,365,000	(9)
09/85	36,881,000	33,323,000	(10)
10/85	35,242,000	29,183,000	(17)
11/85	41,990,000	28,348,000	(32)
12/85	36,042,000	28,442,000	(21)
01/86	35,021,000	29,085,000	(17)
02/86	26,516,000	22,481,000	(15)
03/86	49,399,000	31,278,000	(37)
04/86	38,668,000	34,942,000	(10)
05/86	65,972,000	24,345,000	(63)
06/86	63,244,000	32,720,000	(48)
07/86	49,430,000	35,349,000	(28)
08/86	36,926,000	30,777,000	(17)
09/86	48,401,000	84,764,000	75
10/86	36,949,000	59,365,000	61
11/86	50,510,000	48,394,000	(4)
12/86	69,704,000	52,877,000	(24)
TOTAL	$787,724,000	$669,259,000	(15%)

Note: All figures rounded to nearest thousand. This Table shows a monthly variation between forecasts and actual disbursements ranging from -63% to +75%.

TABLE IX

COMPARISON OF FORECASTED AND ACTUAL BANK RECEIPTS ON A DAILY BASIS DURING THE MONTH OF FEBRUARY 1987

Day	MONEYMAX Forecast	Actual Bank Receipts	Percent Variance
02-02-87	$ 3,405,000	$ 2,145,000	(37)
02-03-87	657,000	2,363,000	260
02-04-87	400,000	447,000	12
02-05-87	3,070,000	889,000	(71)
02-06-87	385,000	1,691,000	339
02-09-87	351,000	435,000	24
02-10-87	351,000	2,060,000	487
02-11-87	3,624,000	2,644,000	(27)
02-12-87	1,508,000	2,264,000	50
02-13-87	744,000	605,000	(19)
02-17-87	1,141,000	434,000	(62)
02-18-87	1,329,000	6,005,000	352
02-19-87	6,465,000	1,052,000	(84)
02-20-87	1,963,000	667,000	(66)
02-23-87	1,420,000	635,000	(55)
02-24-87	522,000	465,000	(11)
02-25-87	627,000	905,000	44
02-26-87	1,213,000	982,000	(19)
02-27-87	411,000	6,206,000	1,410
TOTAL	$29,586,000	$32,894,000	11%

Note: All figures rounded to nearest thousand. This Table shows a daily variation between forecasts and actual receipts ranging from -84% to +1,410%.

TABLE X

COMPARISON OF FORECASTED AND ACTUAL BANK DISBURSEMENTS ON A DAILY BASIS DURING THE MONTH OF FEBRUARY 1987

Day	MONEYMAX Forecast	Actual Bank Disbursement	Percent Variance
02-02-87	$ 0	$ 3,496,000	*
02-03-87	589,000	1,396,000	137
02-04-87	1,214,000	4,127,000	240
02-05-87	0	1,574,000	*
02-06-87	5,961,000	1,092,000	(82)
02-09-87	1,000	1,879,000	*
02-10-87	1,000	1,709,000	*
02-11-87	171,000	1,062,000	521
02-12-87	31,000	570,000	1,739
02-13-87	7,594,000	2,106,000	(72)
02-17-87	589,000	1,571,000	167
02-18-87	1,212,000	4,382,000	262
02-19-87	0	5,620,000	*
02-20-87	4,651,000	583,000	(87)
02-23-87	0	2,333,000	*
02-24-87	0	481,000	*
02-25-87	171,000	895,000	423
02-26-87	0	673,000	*
02-27-87	7,067,000	5,235,000	(26)
TOTAL	$29,252,000	$40,784,000	39%

* Calculated variance is greater than 10,000%

Note: All figures rounded to nearest thousand. This Table shows a daily variation between forecasts and actual disbursements ranging from -87% to more than 10,000%

As TABLE VII through X illustrate, there are significant variations between the City's monthly and daily cash forecasts and actual receipts and disbursements.

Accuracy of MONEYMAX History Files

In our second analysis, we compared the historical cash receipt and disbursement data the City input into the MONEYMAX system to actual bank receipts and disbursements. Because this historical data is the basis for the MONEYMAX cash forecasts it should match or closely approximate actual receipts or disbursements. Conversely, to the degree the historical cash receipt and disbursement data in the MONEYMAX system is inaccurate, any MONEYMAX cash forecast will also be inaccurate. As TABLES XI through XIV illustrate, the MONEYMAX historical data varies significant from actual monthly and daily bank receipts and disbursements.

TABLE XI

COMPARISON OF MONEYMAX HISTORICAL TO ACTUAL RECEIPTS ON A MONTHLY BASIS FOR THE PERIOD OF JULY 1985 - DECEMBER 1986

Month	MONEYMAX History	Actual Bank Receipts	Percent Variance
07/85	$ 33,334,000	$ 26,088,000	(22)
08/85	26,463,000	25,216,000	(5)
09/85	26,748,000	24,497,000	(8)
10/85	34,965,000	26,852,000	(23)
11/85	20,308,000	22,661,000	12
12/85	40,308,000	113,115,000	181
01/86	59,250,000	27,333,000	(54)
02/86	27,516,000	24,829,000	(10)
03/86	27,311,000	20,705,000	(24)
04/86	39,767,000	27,347,000	(31)
05/86	47,093,000	33,105,000	(30)
06/86	70,214,000	45,576,000	(35)
07/86	46,043,000	24,207,000	(47)
08/86	30,103,000	19,190,000	(36)
09/86	22,314,000	62,862,000	182
10/86	36,343,000	52,092,000	43
11/86	27,904,000	35,929,000	29
12/86	44,543,000	63,564,000	43
TOTAL	$660,527,000	$675,168,000	2%

Note: All figures rounded to the nearest thousand. This Table shows a monthly variation between history and actual receipts ranging from -54% to +182%.

TABLE XII

COMPARISON OF MONEYMAX HISTORICAL TO ACTUAL DISBURSEMENTS ON A MONTHLY BASIS FOR THE PERIOD OF JULY 1985 - DECEMBER 1986

Month	MONEYMAX History	Actual Bank Disbursement	Percent Variance
07/85	$ 38,541,000	$ 35,221,000	(9)
08/85	38,033,000	28,365,000	(25)
09/85	37,316,000	33,323,000	(11)
10/85	31,426,000	29,183,000	(7)
11/85	37,418,000	28,348,000	(24)
12/85	34,978,000	28,442,000	(19)
01/86	41,299,000	29,085,000	(30)
02/86	27,027,000	22,481,000	(17)
03/86	35,302,000	31,278,000	(11)
04/86	37,806,000	34,942,000	(8)
05/86	31,948,000	24,345,000	(24)
06/86	45,975,000	32,720,000	(29)
07/86	31,001,000	35,349,000	14
08/86	43,300,000	30,777,000	(29)
09/86	40,976,000	84,764,000	107
10/86	44,578,000	59,365,000	33
11/86	29,954,000	48,394,000	62
12/86	40,587,000	52,877,000	30
TOTAL	$667,465,000	$669,259,000	0%

Note: All figures rounded to the nearest thousand. This Table shows a monthly variation between history and actual disbursements ranging from -30% to +107%.

TABLE XIII

COMPARISON OF MONEYMAX HISTORICAL TO ACTUAL RECEIPTS ON A DAILY BASIS FOR THE MONTH OF JANUARY 1987

Day	MONEYMAX History	Actual Bank Receipts	Percent Variance
01-02-87	$ 1,252,000	$ 5,973,000	377
01-05-87	4,570,000	591,000	(87)
01-06-87	540,000	24,158,000	4,373
01-07-87	363,000	462,000	(109)
01-08-87	23,842,000	214,000	(99)
01-09-87	276,000	638,000	131
01-12-87	2,155,000	3,717,000	72
01-13-87	2,896,000	1,029,000	(64)
01-14-87	451,000	550,000	22
01-15-87	657,000	4,927,000	650
01-16-87	4,706,000	913,000	(81)
01-20-87	1,399,000	1,329,000	(5)
01-21-87	696,000	452,000	(35)
01-22-87	852,000	397,000	(53)
01-23-87	714,000	1,237,000	73
01-26-87	650,000	1,439,000	121
01-27-87	1,434,000	611,000	(57)
01-28-87	320,000	385,000	20
01-29-87	240,000	274,000	14
01-30-87	2,753,000	4,493,000	63
TOTAL	$50,766,000	$53,789,000	6%

Note: All figures rounded to the nearest thousand. This Table shows a monthly variation between history and actual receipts ranging from -109% to +4,373%.

TABLE XIV

COMPARISON OF MONEYMAX HISTORICAL TO ACTUAL DISBURSEMENTS ON A DAILY BASIS FOR THE MONTH OF JANUARY 1987

Day	MONEYMAX History	Actual Bank Disbursement	Percent Variance
01-02-87	$ 9,648,000	$ 8,124,000	(16)
01-05-87	0	3,558,000	*
01-06-87	1,232,000	22,926,000	1,761
01-07-87	1,341,000	4,054,000	202
01-08-87	0	1,331,000	*
01-09-87	3,426,000	1,006,000	(71)
01-12-87	16,000	588,000	3,675
01-13-87	1,000	856,000	85,500
01-14-87	189,000	613,000	224
01-15-87	0	510,000	*
01-16-87	8,496,000	3,834,000	(55)
01-20-87	639,000	3,165,000	395
01-21-87	1,314,000	1,368,000	4
01-22-87	0	4,247,000	*
01-23-87	5,958,000	2,736,000	(54)
01-26-87	11,000	1,396,000	12,591
01-27-87	0	1,405,000	*
01-28-87	186,000	429,000	131
01-29-87	0	924,000	*
01-30-87	10,569,000	5,847,000	(45)
TOTAL	$43,026,000	$69,064,000	61%

* Calculated variance exceeds 1,000,000%

Note: All figures rounded to the nearest thousand. This Table shows a monthly variation between history and actual disbursements ranging from -71% to +85,500%.

As shown in TABLES XI through XIV, the historical monthly and daily data in the MONEYMAX system is very unreliable.

Investment Implications

Because the MONEYMAX historical data is inaccurate, any resultant short-term and intermediate-term cash forecasts are inadequate for short-term cash management and investment decisions. Accordingly, Treasury staff primarily depend upon other information for managing cash and investments on a daily basis. Essentially, daily cash management and investment decisions are made based upon the daily investible balance. Treasury staff derive the daily investible balance by 1) taking the bank provided beginning bank balance, 2) adding in expected receipts, and 3) deducting vendor payments and other disbursements. This process is illustrated below:

ILLUSTRATIVE COMPUTATION OF DAILY INVESTIBLE BALANCE

Bank's Opening Balance:	$ 5,000,000
Investment Maturities and Interest:	5,000,000
Tax Revenue	2,000,000
Fees and Other Collections	200,000
Subtotal	$12,200,000
Payroll Disbursements	$ 1,500,000
Vendor Disbursements	2,000,000
Bank's Compensating Balance	500,000
Subtotal	$ 4,000,000
Amount Available for Investment	$ 8,200,000

Treasury staff have additional information which they use to supplement MONEYMAX for both short and intermediate-term forecasting. These informational sources include the following:

- Monthly projections of cash receipts from Public Works,
- Schedules of investment maturities and interest income,
- Notifications of when the City will be receiving tax revenue from the State and County,
- Payroll projections for the next thirteen weeks, and
- Weekly reports of checks issued over $30,000.

As evidenced by our review, the City needs a comprehensive cash forecasting and management system which corrects the inaccuracies of the MONEYMAX data base and integrates the supplemental information with historical trend information.

Data Base Inaccuracies

TABLES VII through XIV clearly illustrate that neither the MONEYMAX forecasts, nor the MONEYMAX history files are consistent with actual bank receipts and disbursements. The reasons for the variances are not completely understood because Treasury staff have not determined the specific causes for the variances.

Listed below are several factors which contribute to the inaccuracy of the MONEYMAX data base and the resultant cash forecasts:

- The MONEYMAX system forecasts on the basis of what transpired during the same period a year before.

- The General Accounting System input to MONEYMAX is on an accrual or modified accrual basis whereas cash management and investment decisions require a cash basis data base. The difference between an accrued and cash basis method of accounting can be significant. Accordingly, any cash forecast based upon accrual information is highly suspect.

- The dates of projected receipts and disbursements in the MONEYMAX Forecast Report are based on the dates revenue and payment vouchers are prepared or processed. This is not the same as the dates the bank will actually receive or disburse cash.

- Receipts and disbursements are double counted as they move from fund to fund. For example, Federal Revenue Sharing Funds are counted as revenue when they are originally received and counted as revenue again when they are disbursed to other City fund accounts.

All of these factors cause any MONEYMAX short-term cash forecasts to be of questionable value.

Corrective Action

Treasury staff recognize the deficiencies in the cash management system and have taken the following steps to improve the situation:

- A controlled disbursement system with the City's bank has been developed. The bank advises the City of the amount of vendor check clearances which will be processed on a particular day which allows the City to fund the account on the same day. This procedure eliminates uncertainty from the check clearance process.

- For several months, Treasury has been keeping a daily record of all incoming revenues. The daily information is consolidated into weekly and monthly summaries. Eventually, this will provide a sound data base for revenues and will be input to MONEYMAX.

CONCLUSION

The City's short-term cash management and forecasting system is inaccurate. The historical data which is the basis of cash forecasts is highly inaccurate. Accordingly, the resultant cash forecasts projections are also inaccurate. While some of the factors that cause the forecasts to be inaccurate are not understood, Treasury staff have not determined all of the causes for these inaccuracies.

RECOMMENDATION

We recommend that:

Recommendation #4:

The Department of Finance identify and input accurate cash flow information into the MONEYMAX system. If this cannot be done with the General Accounting System (GAS), then Finance should either modify the GAS or develop alternative methods to collect and input accurate receipt and disbursement data. (Priority 2)

FINDING IV

THE REDEVELOPMENT AGENCY LOST INTEREST INCOME BY MAINTAINING BANK BALANCES IN EXCESS OF THE REQUIRED COMPENSATING BANK BALANCE

From July 1985 through February 1987, the Agency lost the opportunity to earn $70,000 in investment income by maintaining a bank balance that averaged $620,000 in excess of the bank's compensating balance requirement. These excess bank balances occurred because the Agency was concerned that the bank would not honor overdrafts.

Banking Service Costs

According to GFOA's publication, Investing Public Funds, there are several methods jurisdictions use to pay for bank services. One method is to pay on a per-item basis. Another is to pay on a flat-fee basis, with adjustments made for above-normal volume. A third method is to pay on a compensating balance basis. Under the compensating balance method the depositor (Agency) must maintain a sufficiently large bank balance to allow the bank to earn enough interest to offset the cost of bank services. The Agency has opted for the compensating balance method with its service bank.

No Formal Banking Agreement

The Redevelopment Agency does not have a formal banking agreement with its service bank, the Bank of America. For over a year, the Agency has neither formalized an agreement with the Bank of America nor solicited bids for new banking services. Consequently, the Agency has maintained an unnecessarily large compensating balance with the Bank of America because it did not know if the bank would honor overdrafts.

TABLE XV compares the Agency's average monthly bank balance to the compensating balance required for the months of July 1985 through February 1987.

TABLE XV

COMPARISON OF THE AGENCIES AVERAGE MONTHLY BANK BALANCES
TO THE COMPENSATING BALANCE REQUIRED
FOR THE MONTHS OF JULY 1985 THROUGH FEBRUARY 1987

Month	Agency Bank Balance	Compensating Balance Required	Excess/Deficit of Actual to Required
July 1985	$ 1,553,800	$ 60,900	$ 1,492,900
August 1985	233,900	120,700	113,200
September 1985	679,900	168,400	511,500
October 1985	671,600	149,300	522,300
November 1985	1,498,300	155,500	1,342,800
December 1985	(209,100)	182,000	(527,400)*
January 1986	877,600	275,300	602,300
February 1986	219,700	370,800	(151,100)
March 1986	483,900	215,300	268,600
April 1986	3,140,900	103,800	3,037,100
May 1986	351,200	136,600	214,600
June 1986	456,800	95,100	361,700
July 1986	310,100	533,700	(223,600)
August 1986	3,215,000	234,500	2,980,500
September 1986	306,400	96,000	210,400
October 1986	444,600	409,200	35,400
November 1986	818,700	90,100	728,600
December 1986	613,500	107,000	506,500
January 1987	446,600	98,600	348,000
February 1987	380,800	365,700	15,100
TOTALS	$16,494,200	$3,968,500	$12,389,400
MONTHLY AVERAGE	$824,700	$198,400	$619,500

* Funds advanced by bank.

As TABLE XV illustrates, the Agency maintained a larger compensating balance than was necessary for seventeen of twenty months from July 1985 through February 1987.

As a result, we estimate that the Agency lost $70,000 in interest earnings during this twenty month period assuming an earnings rate of seven percent and an average monthly excess bank balance of $619,500.

CONCLUSION

The Redevelopment Agency lost approximately $70,000 in interest earnings from July 1985 to February 1987 because the Agency maintained an unnecessarily large bank balance.

RECOMMENDATION

We recommend that:

Recommendation #5:

The Agency either solicit bids for its banking services or combine its banking activities with the City's. (Priority 1)

FINDING V

REDEVELOPMENT AGENCY CASH FORECASTING NEEDS TO BE IMPROVED

The Redevelopment Agency provides Treasury with monthly cash flow projections. Our review of the Agency's cash flow projections revealed that variances between projected and actual expenditures are extensive. Accordingly, Treasury investment officials have adopted a very defensive investment posture and maintained a highly liquid Redevelopment portfolio. As a result, the Redevelopment portfolio's interest earnings were unnecessarily low. We estimate the annual loss in interest earnings to be $500,000 to $800,000 annually.

Cash Forecasting

According to the publication, Investing Public Funds, the cash budget is a forecasting tool used by cash managers to estimate asset balances available for investment. It includes revenues and expenditures but focuses on cash availability. The cash forecasting system should accurately estimate future cash positions so that an investor can know future asset levels with reasonable precision.

Redevelopment Cash Flow Estimates

The Agency provides Treasury with a fiscal year projection of cash revenues and expenditures on a monthly basis. The Agency's Fiscal Unit produces the estimates based on data they receive from Agency operating units and historical information. The projection is periodically updated during the year. The purpose of the Agency's estimates is to provide Treasury with a cash forecast of revenues and expenditures. This enables Treasury officials to invest surplus funds for optimum periods consistent with the Agency's spending patterns. However, the Agency does not compare their estimates to actual expenditures or perform any variance analysis to determine the causes for any variances. As a result, the Agency is providing Treasury with inaccurate projections of cash revenues and expenditures.

In order to assess the extent to which the Agency's cash projections are inaccurate, we compared the Agency's forecasts with actual revenue and expense data from the Accounting Department. Accordingly, we accumulated revenues which were actually realized and deposited into the Agency's portfolio. We did not include revenues held by outside parties, such as a Bond Trustee or accrued but not received revenues. We accumulated expenditures in the same manner and excluded accrued expenditures or internal transfers.

TABLE XVI summarizes our comparison of projected to actual Agency cash receipts and disbursements for three of the Agency's forecasts during 1986-87 (May, October and December). The May 1986 estimate is for the entire 1986-87 fiscal year, October 1986 is for a nine month period, and December 1986 is for a seven month period.

TABLE XVI

COMPARISON OF REDEVELOPMENT AGENCY FORECASTS OF REVENUES AND EXPENDITURES WITH ACTUAL REVENUE AND EXPENDITURES DURING 1986-1987

Period of Estimate	Agency Forecasted Revenues	Actual Revenues	Difference Between Fore-casted and and Actual	%*	Agency Forecasted Expenditures	Actual Expenditures	Difference Between Fore-casted and Actual	%*
July 1986-June 1987	$85,000,000	$ 87,000,000	$<1,000,000>	<1>	$127,000,000	$71,000,000	$56,000,000	44
October 1986-June 198787	41,000,000	38,000,000	3,000,000	7	104,000,000	58,000,000	46,000,000	44
December 1986-June 1987	39,000,000	33,000,000	6,000,000	15	94,000,000	53,000,000	41,000,000	44

* Percentage difference between forecasted and actual.

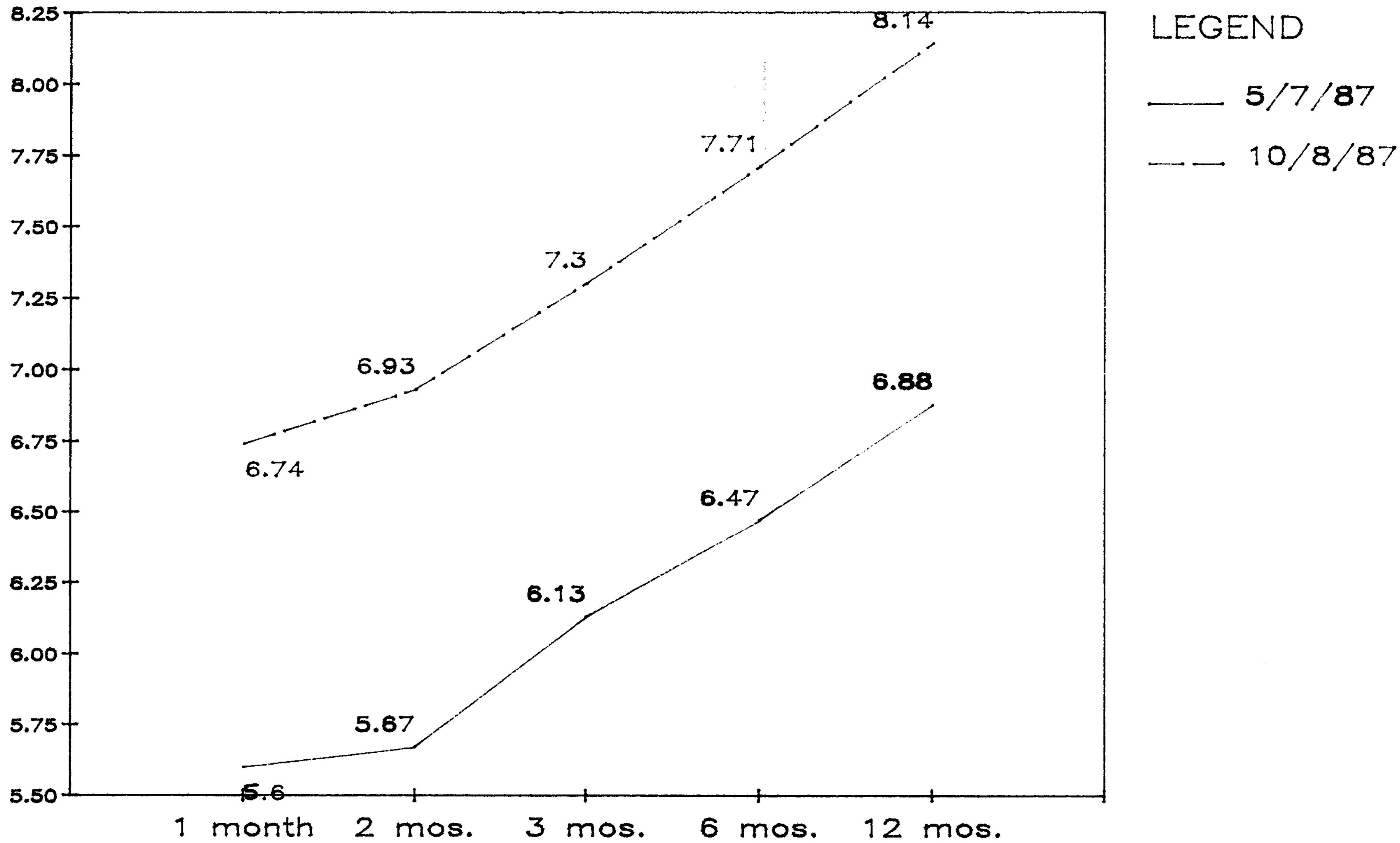
As TABLE XVI demonstrates, the Agency's estimates were reasonably accurate for revenues, but substantially in error for expenditures. According to Treasury and Agency officials, the reason for the expenditure variances is a general Agency pattern of undue optimism regarding the speed with which Capital projects will be accomplished and expenditures made. According to Agency officials, actual expenditures are lagging behind forecasted expenditures because capital projects are proceeding slower than anticipated. In addition, the project managers, whose estimates are the basis for the Agency's projectives, tend to overstate their cash needs as a means of ensuring that funds will be available when they need it. Because this appears to be a common practice among the project managers, it causes the Agency's expenditure projections to be grossly overstated. This in turn costs the Agency money in the form of lost opportunities to earn interest income.

Treasury officials have no alternative but to accept the Agency's cash projections as being accurate. Accordingly, Treasury must maintain adequate liquidity in the Agency's portfolio to meet the Agency's cash needs. Should the Agency overstate its cash needs, Treasury loses the opportunity to invest in longer term and higher earning securities.

TABLE XVII is a composite of yields on Treasury Bills, Treasury Notes, Federal National Mortgage Association and Federal Home Loan Bank Bonds during early May and mid-October 1987. All of which are investment instruments commonly used for City and Redevelopment Agency investments.

TABLE XVII

YIELD CURVE FOR 5/7/87 & 10/8/87 TREASURY BILLS & NOTES GNMA & FNMA



As TABLE XVII shows, the difference between yields at 60 and 180 days is about 80 basis points. This equates to $848,000 in earnings on a portfolio of $106 million, which was the average value of the Agency's Portfolio during 1986-87. Thus, we estimate that the Agency lost between $500,000 and $800,000 in interest earnings during 1986-87 because inaccurate cash projections caused the average maturity for the Agency's portfolio to be shortened unnecessarily by approximately 100 days.

CONCLUSION

Because the Agency's capital project managers overstate estimated cash flow needs, the Treasurer lost an opportunity to substantially increase earnings on the Agency's investment portfolio. We estimate these lost interest earnings at $500,000 to $800,000 in 1986-87.

RECOMMENDATION

We recommend that:

Recommendation #6:

The Agency develop realistic monthly and annual cash flow estimates and perform periodic variance analyses to provide the feedback necessary to adjust their estimates. (Priority 2)

FINDING VI

THE REDEVELOPMENT AGENCY NEEDS TO OBTAIN SURPLUS FUNDS FROM THE BOND TRUSTEE ON A TIMELY BASIS

The Bond Trustee for various Redevelopment Agency bond issues accumulates substantial surplus funds that may be returned to the Agency. Our review revealed, however, that the Agency has been slow to secure available surplus funds from the Bond Trustee. Specifically, the Agency did not secure from the Bond Trustee over $14 million of surplus funds until September 1987 even though $6.3 million of that surplus accumulated as early as 1985-86. As a result, the Bond Trustee held funds that could have 1) increased the size of the Agency's portfolio, 2) allowed some extension of the Agency portfolio's average maturity, and 3) increased the Agency portfolio earnings.

Tax Increment Revenues

The County of Santa Clara collects incremental property taxes and remits them to the Redevelopment Agency. The County's remittance details the funds according to Redevelopment Project Area. The Agency retains 20% of the funds for the 20% Housing Program and remits the remaining tax increments to the Bond Trustee who deposits these tax increments into various bond issue fund accounts. The Bond Trustee is responsible for maintaining and investing these funds and making principal and interest payments to bondholders. Normally, a surplus will accumulate in the bond fund accounts because tax increments substantially exceed the annual debt service payments.

The Agency currently has four outstanding tax allocation bonds. They are the 1977 Rincon Bonds, the 1977 Park Center Bonds, the 1986 Merged Area A Bonds and the 1986 Merged Area B Bonds. Each of these bonds can have several accounts such as an Interest, Principal, Reserve, and Special Account. The Bond Trustee is responsible for maintaining the various Bond Accounts in accordance with bond indenture requirements including the requirement to return to the Agency surplus funds.

Our review revealed that as of June 30, 1987, the Bond Trustee had accumulated nearly $22 million in surplus funds that the Agency could have secured or at least attempted to secure. Specifically, the four bond issues had the following surplus or deficit balances as of June 30, 1987.

Bond Issue	Surplus <Deficit> Balance
1977 Rincon	$23,084,159
1977 Park Center	1,174,200
1986 Merged Area Series A & B	<2,265,732>
	$21,992,627

The Bond Resolution for the 1977 Rincon Bonds provides, in part, the following regarding surplus funds:

> *"(4) Surplus. The Fiscal Agent on or before December 31 of each year, commencing December 31, 1977, shall ascertain the amount of Tax Revenues received or to be received during the then current fiscal year by the Agency based upon the most recent assessed valuation of taxable property in the Project (as certified by the Auditor-Controller of Santa Clara County), and shall estimate that portion of said Tax Revenues which will be in excess of 125% of the amount of principal and interest which shall have have become due or to become due during said fiscal year on the Bonds (and any additional bonds) then outstanding, and shall promptly notify the Agency of the excess portion so determined. The Agency may, by written notice to the Fiscal Agent within 30 days after receipt of such notification, direct that an amount not exceeding said excess portion: (a) be used for the purchase and/or call and redemption of outstanding Bonds; or (b) be paid to the Agency which amount may be used by the Agency for any purpose authorized in the Law,..." (Emphasis added)*

It should be noted that the Bond Trustee did not comply with the above resolution. Specifically, while the Trustee did notify the Agency on December 16, 1986, of the surplus amount at that date, the notification did not disclose the estimated excess tax increments that would be received during the remainer of the fiscal year. Thus, the surplus was understated as of the date of the notification because most excess tax increments are received after December. As a result, audit staff had to calculate the surplus balances shown above. It should also be noted that when audit staff discussed the surplus funds with Agency staff in July and August 1987, they conceded that they had not been very aggressive about securing surplus funds. However, on August 21, 1987, the Agency did secure $6.3 million from the Bond Trustee. This $6.3 million represented a surplus that had accumulated in 1985-86. Further, on September 2, 1987, the Agency requested in writing that the Bond Trustee return 1986-87 surplus funds to the Agency. On September 3, 1987, the Bond Trustee remitted approximately $11.4 million to the Agency. In our opinion, the Agency should closely monitor Bond Trustee surplus funds and secure such funds in accordance with board resolution provisions. By so doing, the Agency can exercise more control over the investment of these funds and potentially increase earnings for the Agency's entire portfolio. Specifically, by adding funds to its portfolio, the Agency may be able to extend the portfolio's average maturity. For example, the $17.7 million in surplus funds that the Agency received in August and September 1987 could be invested in instruments with maturities greater than the portfolio average of 77 days. This could very well be the case if there were no short term demands on the $17.7 million. Thus, to the extent these surplus funds are invested in longer term instruments the Agency's overall portfolio earnings would improve.

CONCLUSION

The Redevelopment Agency has been slow to secure the return of surplus funds from the Bond Trustee. As a result, the Agency has potentially lost the opportunity to increase the size and earnings of it investment portfolio.

Recommendation #7:

The Redevelopment Agency develop and implement procedures to ensure that the Bond Trustee returns surplus funds in a timely manner. (Priority 2)

FINDING VII

THE FINANCE DEPARTMENT NEEDS TO IMPROVE ITS INTER-DEPARTMENTAL COORDINATION AND MONITORING OF BOND TRUSTEE INVESTMENTS

The Finance Department's Treasury Division and Debt Manager share debt management responsibilities. As such, it is important that the Treasury Division coordinate its activities with the Debt Manager and closely monitor Bond Trustee investments. However, our review revealed that such coordination is informal at best and that Treasury does not adequately monitor Bond Trustee investments. As a result, as of June 30, 1987, the Bond Trustee had invested over $39 million in investments that either violated bond indenture provisions or were at variance with Treasury's internal investment policy.

Finance Department's Dual Responsibilities

Within the Finance Department, both the Treasury Division and Debt Manager share responsibility for debt management. Specifically, the Treasury Division is responsible for investing bond proceeds and monitoring Bond Trustee investments while the Debt Manager is responsible for meeting bond indenture requirements. Because bond indentures frequently impose investment restrictions on Bond Trustees, Treasury should keep the Debt Manager apprised of Bond Trustee activities and both Treasury and the Debt Manager should confer with the Bond Trustee regarding investment decisions. However, our review revealed that such coordination between Treasury and the Debt Manager is only informal and that the Bond Trustee does not confer with either Treasury or the Debt Manager when making investment decisions. Instead, at the time of each investment transaction, the Bond Trustee telephones the Treasury Assistant or Debt Manager and advises them that an investment is maturing and must be reinvested. Finance merely advises the Bond Trustee as to when the Agency may need funds but does not participate in the reinvestment decision. The Bond Trustee does subsequently provide Finance with a month end report that details investment transactions by face value, purchase price, type, rate and maturity. However, we could not document that Finance reviews these reports for conformance with bond indenture requirements or conformance with City investment policies.

Bond Trustee Noncompliance

Federal Farm Credit Bank (FFCB) notes are U.S. Government instruments which the federal government does not guarantee. Our review revealed that a Bond Trustee was not in compliance with Redevelopment Bond indentures regarding FFCB's. Specifically, the bond indentures for the 1986 Merged Area Series A and B, provide that Reserve Account funds can only be invested in instruments that the US Government fully guarantees. However, as of June 30, 1987, the Bond Trustee had $24,030,000 of Reserve Account funds invested in FFCB's that were not U.S. Government fully guaranteed.

In addition, in February 1986, based on negative publicity surrounding the FFCB, the Finance Department made an internal policy decision to exclude FFCB's from its portfolio.* According to the Treasury Assistant, she verbally requested the Bond Trustee to stop investing in FFCB instruments on several occasions. However, instead of adhering to the Treasury Assistant's request, the Trustee continued to invest over $15 million in FFCB investments for various bond funds. As a result, as of June 30, 1987, Bond Trustee had invested over $39 million in FFCB's despite bond indenture prohibitions and/or City requests not to do so.

It should be noted that although the Bond Trustee is responsible for the selection investments, the City is responsible for assuring the solvency of the investments. Specifically, the bond indentures state:

> *"Neither the Trustee nor any Authenticating Agent shall be liable in connection with the performance of its duties hereunder, except for its own negligence or willful default."*

Thus, the Agency or the City may be at risk to the extent that Bond Trustee investments lose value. While the Bond Trustee subsequently reinvested the $39 million in FFCB's into other instruments, it is essential that Finance formalize procedures to prevent future noncompliances with bond indenture requirements and City policies.

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* The City's official investment policy was not changed because of the possibility that the FFCB's financial problems were temporary.

CONCLUSION

As of June 30, 1987, a Bond Trustee had invested over $39 million in instruments that were either not in compliance with bond indentures or the City's investment policy. Finance needs to effectively monitor Bond Trustee investments for compliance issues and coordinate Treasury and Debt Manager activities.

RECOMMENDATION

We recommend that:

Recommendation #8:

The Treasury Division develop and implement formal procedures for coordinating with the Debt Manager and reviewing monthly Bond Trustee statements for compliance with the bond indenture requirements and City investment policies. (Priority 2)

CITY OF SAN JOSE - MEMORANDUM

TO: Honorable Mayor & City Council

FROM: Susan E. George
Director of Finance

Edward G. Schilling
Deputy City Manager

Frances A. Galloni
Director of Personnel

SUBJECT: RESPONSE TO CITY AUDITOR'S REVIEW OF THE CITY'S RETIREMENT PLANS AND THE CITY AND REDEVELOPMENT AGENCY'S CASH MANAGEMENT ACTIVITIES

DATE: December 29, 1987

APPROVED Susan E. George DATE 1/8/88

INTRODUCTION

The City Auditor's Review has been examined and evaluated by staff in the Finance Department, Personnel Department and Redevelopment Agency. With the exception of the first recommendation pertaining to the City's Retirement Plans' investment strategy, there is general concurrence with the recommendations as presented in the Review. Specific responses to each recommendation are listed below. For reference, the responding department is indicated in parentheses at the end of each reply.

DISCUSSION

Recommendation #1:

The Retirement Plan Boards consider making a strategic change from active equity management to passive management for a portion of their equity portfolio. (Priority 1)

Response

The Retirement Boards have chosen to operate risk averse portfolios which by definition distinguishes their strategies from those of the index funds. In the Federated System, San Jose Municipal Code Section 3.24.350(E) contains the restrictions that must be adhered to when investing in equity securities. These restrictions are made applicable to the Chapter 3.28 retirement plan by their reference in Section 3.28.350 of the San Jose Municipal Code. In the Police and Fire Plan the restrictions are found in San Jose Municipal Code Section 3.36.350(E). These restrictions are conscious, deliberate efforts to reduce risk in the retirement portfolios. Risk is not an element in the Standard & Poors 500 stock composite index. That index contains all the risk that there is in that market.

It is true that the Retirement Boards have worked with seven equity managers over the past 5 years. The reason is that, within the context of the investment guidelines, certain strategic expectations were not being met. That demonstrates that the Boards are acting in a prudent manner. They are seeking to maximize our return while maintaining a high degree of safety, low risk and low volatility.

The stock market indexes are not the only means of having superior returns in the equity market. There are a number of equity managers who have beaten the market's performance over various time periods. For example, the 10-year period ending in December 1985, 58% of the equity manager's performance surpassed that of the S&P 500 stock composite index. For the 10 years ending June 30, 1986, the median fund in the SEI database earned 15.8% on investment and the S&P 500 returned 14.6%. And, for the 10 years ending September 30, 1987, the median fund with SEI returned 19.9% versus 18.2% for the S&P 500.

Perhaps those managers who have outperformed the S&P 500 index have risk tolerances that are greater than that produced by the City's Municipal Code. Most public funds in this state are using the "prudent man" rule. The California Public Employees Fund adopted the prudent man rule with the passage of Proposition 21. Staff should request the Boards to review the investment restrictions to determine if they should be liberalized. The best performing group of equity investments over the last 10 years has been international equities. In addition, there are a number of domestic securities that the City could not buy because of the investment restrictions. Equity index funds comprise just one of the possible areas that the City could use to improve returns.

The Federated Board is in the process of completing an asset allocation study. One of the products of such a study is an examination of the level of risk that the Board is willing to take. When the study is complete, the Federated Board can make recommendations to Council concerning the risk level and investment product which it feels is most appropriate.

(Personnel Department)

Recommendation #2:

The Retirement Plans prepare budgets which provide full disclosure of administrative expenditures. We also recommend that these expenses be included in the actuarial data base when contribution rates are established and fully absorbed as Plan expenditures. (Priority 1)

Response

Federated Plan: Effective July 1, 1986,through the meet and confer process, the employee groups who are members of the Federated Plan agreed to have the Plan pay non-personal expenses. At that time, the budget for the non-personal costs for the Federated System was charged to the Retirement Plan. The proposed 1987-88 budget for non-personal costs was sent to the Federated Board in May 1987. These costs are included now in the acturial data.

Staff costs and other indirect labor costs of the Federated Plan must continue to be charged to the General Fund in the Personnel Department budget until negotiations are completed with all affected bargaining groups.

Police and Fire Plan: No Retirement Plan administrative costs were payable by the Police and Fire Department Retirement Plan until July 12, 1987. At that time, San Jose Municipal Code Section 3.36.1570 was amended to provide that non-personal costs were to be charged to and payable from the Police and Fire Department Retirement Plan. Since that time, the Firefighters and the Police Officers have agreed that salary costs and other indirect labor costs may be charged to the Police and Fire Retirement Plan. The related amendment to Section 3.36.1570 will be acted on by the City Council on January 12, 1988. When that amendment becomes effective, staff will then formulate a budget for the Police and Fire Retirement Plan.

Recommendation #3:

The administration initiate the "meet and confer" process to effect the reallocation of Retirement Plan administrative costs from the General Fund to the Retirement Plans. (Priority 2)

Response

The City has been negotiating with the employee groups on this issue for 6 to 7 years. Most of the retirement costs are now charged to the retirement plans. As discussed in the response to Recommendation #2, an amendment to San Jose Municipal Code Section 3.36.1570 will be acted upon by City Council on January 12, 1988 which will allow salary and other indirect labor costs to be charged to the Police and Fire Retirement Plan. This effort will be continued until the costs that are associated with management of the plans are properly charged to both funds.

(Personnel Department)

Recommendation #4:

The Department of Finance identify and input accurate cash flow information into the MONEYMAX system. If this cannot be done with the General Accounting System (GAS), then Finance should either modify the GAS or develop alternative methods to collect and input accurate receipt and disbursement data. (Priority 2)

Response:

As the City Auditor acknowledges, the General Accounting System data are imbedded with certain structural problems which are not easily identifiable and which introduce errors into the cash flow forecast application. In addition, the City is in the initial stage of replacing the General Accounting System which precludes its availability as a future data base. Rather than depend on an unsatisfactory data source which cannot be efficiently improved, staff has chosen to establish an independent data base as described below.

Since February 13, 1987, the Banking and Investment Section of the Treasury Division has been in the process of conducting a major work project which focuses on compiling accurate input for the Moneymax application framework. During the first phase (revenue research), bank records and revenue vouchers were examined and sorted into chronological categories which resulted in refined information about the dates these revenue sources actually became available for investment. During the second phase, targeted for completion in May 1988 (disbursement research), similar information will be compiled for routine cash outlays. The difficult variables to manage are naturally expected to be capital outlays which will initially lead to some degree of imprecision depending upon the quality of projections in this area.

There will never be a perfectly precise forecast under any circumstances, for even refined historical data can only serve as a guideline. At some point the marginal effort devoted to developing more exact numbers will not exceed the corresponding marginal utility to the cash and investment management program. Staff agrees that that point has not been reached yet, but wishes to caution against the overkill that may result if sensational variance ratios, e.g. those calculated with negligible or zero denominators, are used as performance measures when absolute differences may provide the foundation for more temperate and meaningful analyses.

(Finance Department)

Recommendation #5:

The Agency either solicit bids for its banking services or combine its banking activities with the City's. (Priority 1)

Response:

Agency staff is currently reviewing the format used in the RFP produced by Treasury staff when it solicited bids for the City's banking services in 1986. Staff anticipates that the document will be slightly modified to reflect the Agency's requirements and has targeted the RFP's release for the spring of 1988.

(Redevelopment Agency)

Recommendation #6:

The Agency develop realistic monthly and annual cash flow estimates and perform periodic variance analyses to provide the feedback necessary to adjust their estimates. (Priority 2)

Response

The Agency will continue to submit monthly and annual cash flow estimates to the Treasury Division. The Agency will also continue its efforts to improve the reliability of cash flow estimates through increased training of all personnel involved in the process and through further analyses comparing projections to actual receipts and expenditures.

Forecasting the timing and cash needs of large capital outlays can never be as reliable as projections for regular operating expenditures more typical of the City side. Shifts in developer schedules, economic changes and policy decisions by the Board and Council often cannot be predicted precisely in a month-by-month forecast. The variables uniquely associated with capital projects require that a large portion of Agency funds be maintained in relatively short term investments. The maturity lengths and potential higher earnings suggested in the Auditor's report are unrealistic for the separate Agency pool, but may be achievable through consolidation with the City's investments.

The Agency currently reviews forecast-to-actual variances on a project by project basis and will continue to refine its forecasting efforts.

(Redevelopment Agency)

Recommendation #7:

The Redevelopment Agency develop and implement procedures to ensure that the Bond Trustee returns surplus funds in a timely manner. (Priority 2)

Response

Difficulties experienced by the City and the Redevelopment Agency in dealing with bond trustees is a problem endemic to many California municipalities. The chronic understaffing of bank trust departments requires that staff monitor their work carefully to ensure compliance with bond covenants, appropriate investment of trustee-managed funds, and the return of surpluses in a timely fashion.

The procedures for the return of surplus funds to the Agency are contained within the trust indenture for each bond issue. Because the procedure varies from one indenture to the next, the Agency monitors all bond issues monthly using statements provided by the trustees.

To maximize the Agency's earnings on debt service funds, the Agency times its requests for return of surplus funds to coincide with maturities of long term investments held by the trustees. Requiring more frequent payments of surplus funds by the trustee would reduce the Agency's earnings from these long-term investments.

By managing the trust funds in this manner, the Agency will continue to pursue investment and payment schedules which enhance Agency yields to the greatest extent possible.

A set of more general procedures for the monitoring of trustee-held funds will be developed by June 1988.

(Redevelopment Agency)

Recommendation #8:

The Treasury Division develop and implement formal procedures for coordinating with the Debt Manager and reviewing monthly Bond Trustee statements for compliance with the bond indenture requirements and City investment policies. (Priority 2).

Response:

The Banking and Investment Section's resources have been primarily devoted to ensuring that in-house portfolio management and the associated basic supporting systems are solidly intact. Determining the most effective way to stretch those resources further to incorporate monitoring all trustee accounts in conjunction with Debt Administration will require additional analysis. The Director of Finance will assign that analysis to the new Assistant Director of Finance with the expectation that coordination will be developed through procedures, as recommended, by October 1, 1988.

(Finance Department)

CONCLUSION

The Finance Department, Personnel Department and Redevelopment Agency all appreciate the effort devoted to this Review by their respective staffs and the City Auditor's staff. The exercise of developing, analyzing and implementing ideas to support the City's fiscal and administrative objectives is a healthy process for all concerned.

Respectfully submitted,

Susan E. George
Susan E. George
Director of Finance

for Sharon E. Garrison
Edward G. Schilling
Deputy City Manager

for
Frances A. Galloni
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SACRAMENTO COUNTY - BOARD OF RETIREMENT

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INVESTMENT OBJECTIVES AND POLICIES

GENERAL OBJECTIVES

The Sacramento County Employees' Retirement Association's (SCERA) investment objectives are synonymous with its goals; something the plan is working for. Objectives or goals are general in nature, governing the broad policies of the fund and specific in the form of performance objectives, discussed in the next section. The General Objectives are meant to provide a framework for the operation of the fund and are nonspecific intentionally.

SCERA's general objectives are as follows:

1. **Provide for Present and Future Benefit Payments.**

   The overall objective of SCERA's pension investment program is to minimize the cost of paying benefits to its participants and their beneficiaries in the amounts and at the times called for, through the investment of contributions and other fund assets, utilizing investment policies designed to maintain adequate funding of the plan's liabilities over time.

2. **Make Prudent Investments.**

   Pension assets will be invested to produce a return on investment which is based on levels of liquidity and investment risk that are prudent and reasonable under present circumstances and such circumstances may change over time.

3. **Set Reasonable Investments Relative to Other Pension Funds.**

   SCERA's selection of investment vehicles and policies will be judged against other private and public pension funds with special emphasis on comparisons with public funds.

4. **Establish Policy and Objective Review.**

   A formal review of SCERA's Investment Objectives and Policies will be conducted annually with an updated financial projection developed every two years.

5. **Create a Reasonable Pension Investment Program.**

   The pension investment program must operate in compliance with all applicable State and Federal laws and regulations concerning the investment of pension assets.

APPENDIX A

PERFORMANCE OBJECTIVES

SCERA's performance objectives can be divided into two components: objectives for the overall fund, and objectives for the individual portfolio components. The performance evaluator will incorporate both levels of objectives in its quarterly review of the Fund's performance.

The performance objectives for the overall fund are threefold:*

1. Objective Relative to Asset Allocation Targets;
2. Objective Relative to Inflation; and
3. Objective Relative to Actuarial Rate of Interest.

The first objective results in a comparative index which reflects SCERA's unique asset allocation policy. Meeting this objective indicates that the active management of the various portfolio components has added value over a passively managed fund with a similar asset mix. The inflation objective requires that the investment performance provide an adequate real return over the expected rate of inflation. Lastly, the Fund should earn a return over the assumed actuarial rate of interest (9.5% for 1985).

The statement of investment objectives and policies includes two types of performance objectives. The first type described above are objectives to be strived for in the overall fund and they reflect the plan's overall asset allocation, performance relative to inflation, and the plan's actuarial interest rate assumption. The second set of performance objectives relate to the five-year performance objectives for the individual components of the portfolio by asset class and by individual manager. The objectives stated in that section pose a high standard for the System's portfolio to meet. The attainment of those objectives is dependent upon each of the System's managers generating superior rates of return.

History has proven that managers do not always meet the objectives that were set for them, for a variety of reasons. Recognizing this, it is important to keep in mind that the attainment of the five-year performance objectives is a very high standard and is one that may be very difficult to meet. Meeting the five-year performance objectives is the goal of the association, but performance that is close to meeting that goal will be of significant financial benefit to the plan's financial condition and does not reflect a deficiency in the plan's investment objectives.

*The actual performance objectives are shown in Table 1.

Table 1

FIVE YEAR PERFORMANCE OBJECTIVES

Overall Fund Objectives (After all costs).

Relative to Asset Allocation Targets, Index Weighted by:

35% x S&P 500 X 1.125
50% x Shearson Lehman Corporate/Government Index X 1.10
15% x Wilshire Real Estate Index

100%

Relative to Inflation:

3.0% in excess of Consumer Price Index

Relative to Assumed Actuarial Rate of Interest:

Return above 9.5% (1985 rate) or as changed in subsequent years

Objectives for Individual Portfolio Components.

Equities	
Core	
Mellon	Return equal to S&P 500
Alliance-6th, 7th, 8th Decile	Return equal to NYSE 6th, 7th, 8th decile
Alliance-9th, 10th Decile	Return equal to NYSE 9th, 10th decile
Growth	
Pilgrim, Baxter, Hoyt, Greig	2.5% in excess of S&P 500
Nicholas-Applegate	2.5% in excess of S&P 500
Value/Defensive	
Management Asset Corp	2.0% in excess of S&P 500
Generalist	
Furman Selz Capital	2.0% in excess of S&P 500
Fixed Income	1% in excess of Shearson Lehman Government/Corporate Index
Real Estate	Return equal to Wilshire Real Estate Index

The Performance Objectives in Table 1 can be translated into the expected performance for the plan's total fund, asset categories, and individual portfolio components as shown in Figure 1. The total fund is a composite of the weighted asset categories, i.e., 35% in equities plus 50% in fixed income plus 15% in real estate. The various asset categories are broken down into the weighted individual portfolio components. The expected returns are based upon the following assumption.

POLICIES

A policy can be thought of as a definite course or method of action selected to guide and determine present and future decisions in a prudent manner. As such the Board's policies cover a number of areas.

Asset Allocation.

The decision of how to distribute the SCERA's assets among broad asset categories, such as equities, fixed income, and real estate is based upon a number of factors including but not limited to:

- the financial condition of the plan
- the expected long term capital market outlook
- SCERA's risk tolerance
- future retirements
- participant growth
- cash flow

These factors establish the basis for SCERA's long term or strategic asset allocation targets and ranges. The short term or tactical allocation decisions will depend upon the input from SCERA, its investment advisors, and consultants. Importantly, the long term strategy includes ranges for each asset category in order to take advantage of market opportunities.

The asset allocation policy is:

SCERA Asset Allocation Policy

	Current*	Target	Range Minimum	Range Maximum
Equities				
Core	0%	17.50%	10%	25%
Growth	0	5.25	5	10
Value/Defensive	0	5.25	5	10
Generalist	20	7.00	5	15%
	20%	35.00%	25%	60%
Fixed Income	74%	50.00%	40%	60%
Real Estate				
Equity Real Estate	0%	15.00%	5%	20%
Cash	6%	0	0%	30%
	100%	100.00%	---	---

*At Market Value on March 31, 1985.

Core Equities -- The S&P 500 core portfolio is designed to track the return of the S&P 500 within approximately 0.5% per year. The core portfolio is typically a low risk, broadly diversified portfolio with a market-like yield and P/E ratio. The two small stock core portfolios, the 6th, 7th, and 8th, Decile portfolio, and the 9th and 10th Decile portfolio are designed to track the corresponding deciles, 6th through 10th, of New York Stock Exchange (NYSE).

Growth Stocks -- This area is characterized by higher risk, lower yield, and higher P/E ratios. Growth stock portfolios display above-market performance in rising markets.

Value/Defensive -- This segment will focus on outperforming the market in down and flat markets, while obtaining market or below market performance in "up" markets. Value/defensive portfolios are usually characterized by high yields and low P/E ratios.

Generalist -- This category emphasizes the value added approach; it attempts to obtain above index returns through various stock selection techniques.

Intermediate Term Bonds -- This identifies an actively managed corporate and government bond portfolio with an average maturity between five and ten years.

Equity Real Estate -- This entails equity participation in commercial, industrial, and other nonresidential real estate properties.

Implementation of Asset Allocation Policy.

It is intended that SCERA move toward the asset allocation policy over time, primarily through the allocation of net cash flow.

Frequency of Review of Asset Allocation.

SCERA will review the appropriateness of its Asset Allocation Targets and Ranges in light of changing plan and market conditions. Such review will occur on an annual basis with an updated projection of assets and liabilities conducted at least every two years.

Alternative Assets.

Although SCERA is now limiting its investments to stocks, fixed income and equity real estate, this does not preclude the possibility of investing in alternative asset categories such as venture capital, international stocks, leveraged buyouts, etc. The Board will on occasion review the appropriateness of these assets in light of existing capital market conditions and the use of such vehicles by other pension funds.

Decision Making Structure.

The Board of Retirement has the sole authority to delegate responsibilities to its external advisors.

Performance Review.

The Board of Retirement, with the assistance of its consultant, will review the investment performance on a quarterly basis. Performance will be measured on the total portfolio and individual components including stocks, fixed income, and real estate. In addition, the performance of each component will be broken down into individual portfolios.

Comparisons will be made against the market indices defined in this document (see page 2). A variance from the stated performance objective will be calculated each quarter. Additionally, the portfolios' actual investment approach will be monitored against the required investment style to determine whether the manager is adhering to its acknowledged investment skill.

Every six months, the Board will review a specific component of the total investment portfolio in more detail. ("Component" refers to stocks, fixed income, and equity real estate. With three components, the Board will conduct a detailed review of each component every year and a half. Such detailed reviews will be in addition to the normal quarterly performance reporting which will include an analysis of each component.) In addition to comparing performance to market indices, each portfolio's return will be attributed to a variety of factors to determine the underlying causes of a manager's return. For the equity portfolios, returns will be attributed to market timing, sector weighting, stock selection, and trading. Bond portfolio performance will be attributed to interest rate timing, sector weighting, issue selection, and trading.

Finally, portfolio turnover will be monitored to ensure that unnecessary trading activity is not incurred. This is particularly relevant in the equity portfolios where commission and trading costs are highest. Comparisons will be made with other funds and consideration will be given to existing market conditions. Often turnover increases during rising markets while flat or declining markets tend to reduce portfolio activity.